EHP Brief
ENVIRONMENTAL HEALTH PROJECT

Nepal Vector-Borne Disease Program

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In 1998, the Environmental Health Project (EHP), funded by the U.S. Agency for International Development (USAID), launched a five-year program in Nepal to assist the Ministry of Health of His Majesty's Government with the vector-borne disease component of the Nepal Infectious Disease Program.

The Nepal Vector-Borne Disease Program has five objectives:

1. Strengthen the institutional capacity of the Vector-Borne Disease Research and Training Center (VBDRTC) to function effectively as a national and regional center for vector-borne diseases.
2. Improve the surveillance capacity of the Ministry of Health for early detection and response to outbreaks of priority vector-borne diseases.*
3. Improve the availability to the Ministry of Health of information on the epidemiology of malaria, kala-azar, and Japanese encephalitis.
4. Develop and pilot-test sustainable intervention strategies for the prevention and control of malaria, kala-azar, and Japanese encephalitis.
5. Assist the Ministry of Health in establishing intercountry linkages for addressing cross-border prevention and control of priority vector-borne diseases.*

Strategic Directions

Within this framework, EHP has implemented a number of activities, some of which have been carried out in collaboration with national, regional and international partners:

- *Development of human resources:* To address the need for increased technical resources in the field of vector-borne diseases, a pool of experts and trained personnel has been identified and trained. In programs conducted by EHP, professionals are trained in laboratory diagnosis, medical entomology, parasitology, sociobehavioral aspects, and mapping approaches, including geographic information systems and global positioning systems.
- *Establishment and improvement of laboratory diagnostic facilities for kala-azar and Japanese encephalitis:* Laboratory diagnostic facilities for kala-azar and Japanese encephalitis have been established in four different regional centers. The K39 dipstick—a new diagnostic technology for the laboratory diagnosis of kala-azar—has been introduced in hospitals and primary health centers.
- *Strengthening the Early Warning Reporting System (EWARS) and surveillance:* In consultation with EHP, the Ministry of Health decided to include vector-borne diseases in the EWARS. Based on an assessment and evaluation of EWARS, approaches for strengthening the system are being developed.
- *Strengthening of VBDRTC:* Addressing the needs of VBDRTC, EHP has worked with the center's Development Board to

* Currently the priority vector-borne diseases are malaria, kala-azar, and Japanese encephalitis.

increase VBDRTC's human resources and further strengthen its infrastructure.

- *Collection and analysis of new information:* In this context, a comprehensive vector-borne disease database—which includes qualitative and quantitative data and maps for the distribution of malaria, kala-azar, and Japanese encephalitis—has been developed.
- *Operations research:* To complement epidemiological data collection, EHP has conducted operations research to identify strategic approaches for designing and conducting several intervention approaches for improved prevention and control of vector-borne diseases. This operations research has addressed the following areas:
  - Kala-azar vector biting rhythm and susceptibility to insecticides
  - The economic effects of kala-azar
  - Treatment practices of drug vendors and communities in the Terai districts
- *Community-based interventions:* EHP is collaborating with the Center for International Studies, an international nongovernmental organization, on community-based interventions for prevention and control of vector-borne diseases. These interventions, focused on behavior change, are being pilot-tested in Dhanusha and Mahottari Districts. Among other community-based activities is the training of trainers and female community health volunteers of Kanchanpur District in community-based malaria prevention and control.
- *Cross-border collaboration and networking:* Cross-border activities will be an important component of the Nepal program, and cross-border collaborative activities on vector-borne diseases have been initiated. In this context, intercountry cross-border workshops have been held, regional discussions are under way, and a Bangladesh, Bhutan, India, and Nepal Network has been established. The network has launched its World Wide Web site at http://www.bbin.org.

The major activities of EHP/Nepal have been captured in over 150 reports and studies. For more information on the Nepal Vector-Borne Disease Program, please contact: Dr. Pandu Wijeyaratne at ehp@wlink.com.np or Ms. Lisa Nichols at nicholsls@ehproject.org.

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